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JAN 1970

NPIC/TSSG/RED-1984-69

MEMORANDUM FOR: Director, National Photographic Interpretation Center

SUBJECT : Proposed Contract with [redacted] 25X1
Experimental Work for Improvement of Lamp Performance
for High Intensity Light Tables at a [redacted] 25X1

1. This memorandum requests approval for the commitment of funds for a contract. The specific request is stated in Paragraph 7.

2. With the increased quality of imagery from intelligence reconnaissance systems and the development of improved optical systems to view the imagery, a need currently exists for an improved, more uniform, higher intensity light source for light tables. Past attempts to increase the intensity of light tables have resulted in excessive heat which, in turn, required elaborate coolant systems. In the past, when high intensity light sources (3,000 foot lamberts) were provided to insure adequate illumination to view imagery with high magnification optics, it has been difficult to provide uniform dimming down to 100 foot lamberts without discernable flicker. The short delivery schedules required--because these light tables were required to handle imagery from contemporary acquisition systems--have not permitted manufacturers adequate lead time or enough incentive to thoroughly investigate improved lighting systems. The resulting light tables have often exhibited uneven lighting (differential intensity across the format), inadequate dimming range, large bulky transformers, and costly and hard to maintain coolant systems.

3. The proposed program is directed toward developing techniques to obtain a uniform, high intensity light over a 10" by 20" area without resorting to liquid coolants; providing uniform dimming down to 100 foot lamberts without discernable flicker; limiting the heat rise of the viewing surface to less than 35°F above ambient while, at the same time, reducing the size and weight of the transformer required; and keeping the manufacturing cost at a level competitive with present day light sources. The contractor will perform research and will breadboard new lighting system concepts, periodically reporting the results of the research and tests. The technical risk in this project is fairly high because of the unknowns involved, but the potential improvement in future light tables more than justifies the risk.

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25X1

SUBJECT: Proposed Contract with [redacted] for Experimental Work for Improvement of Lamp Performance for High Intensity Light Tables [redacted]

25X1

25X1

4. The program is based on an unsolicited proposal submitted by [redacted] This project has a good chance of success because the contractor is taking new, technically sound, and imaginative approaches to the problems. The contractor has proposed new methods to dissipate heat from the lamp sources and sound electronic methods of increasing the lamp intensity as well as providing an acceptable dimming range. The contractor has performed very satisfactorily on previous contracts and has the necessary skills to perform this work.

5. The results from this study will be used in writing specifications for future light tables and will possibly be used to modify present systems.

6. The sterility code 1 is appropriate for this project. The work and reports will be unclassified.

25X1

7. It is requested that approval be granted to negotiate a contract with [redacted] to conduct the program described at a cost

25X1

not to exceed [redacted]

25X1

[redacted]
Chief, Technical Services & Support Group,
NPIC

Attachments:

25X1

1. [redacted] Proposal
2. Procurement Form

APPROVED: _____

ARTHUR C. LUNDAHL
Director
National Photographic Interpretation Center

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25X1

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